IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Canceled)

2-24 (Canceled)

25. (New) A data processing method for distributing rows of an outer parity block (PO) of an error correction code to each one of a plurality of sectors, said data processing method comprising:

defining a first information data block including K sectors and a second information data block including K sectors;

generating a first outer parity block (PO-a) for each column of a third information data block, the third information data block being an aggregation of sectors of even-numbered rows of the first information data block and sectors of odd-numbered rows of the second information data block; and

generating a second outer parity block (PO-b) for each column of a fourth information data block, the fourth information data block being an aggregation of sectors of odd - numbered rows of the first information data block and sectors of even-numbered rows of the second information data block.

26. (New) An error correction code for data defined as a first information data block including K sectors and a second information data block including K sectors, comprising:

a first outer parity block (PO-a) generated for each column of a third information data block, the third information data block being an aggregation of sectors of even-numbered

rows of the first information data block and sectors of odd-numbered rows of the second information data block; and

a second outer parity block (PO-b) generated for each row of a fourth information data block, the fourth information data block being an aggregation of sectors of odd - numbered rows of the first information data block and sectors of even-numbered rows of the second information data block.

27. (New) An error correction code according to claim 26, wherein identification information (ID) is attached to a header of each sector.

28. (New) An error correction code according to claim 26, wherein:

the first outer parity block (PO-a) includes rows which are arranged in a sector arrangement order and which are alternately inserted between the sectors of the even-numbered rows and the sectors of the odd-numbered rows; and

the second outer parity block (PO-b) includes rows which are arranged in the sector arrangement order in and which are alternately inserted between the sectors of the odd-numbered rows and the sectors of the even-numbered rows.

29. (New) An information recording medium configured to store an error correction code for data defined by a first information data block including K sectors and a second information data block including K sectors, wherein the stored error correction code comprises:

a first outer parity block (PO-a) generated for each column of a third information data block, the third information data block being an aggregation of sectors of even-numbered

rows of the first information data block and sectors of odd-numbered rows of the second information data block; and

a second outer parity block (PO-b) generated for each column of a fourth information data block, the fourth information data block being an aggregation of sectors of odd-numbered rows of the first information data block and sectors of even-numbered rows of the second information data block.

30. (New) An information recording medium according to claim 29, wherein identification information (ID) is attached to a header of each sector.

31. (New) An information recording medium according to claim 29, wherein:

the first outer parity block (PO-a) includes rows which are arranged in a sector arrangement order and which are alternately inserted between the sectors of the even-numbered rows and the sectors of the odd-numbered rows; and

the second outer parity block (PO-b) includes rows which are arranged in the sector arrangement order and which are alternately inserted between the sectors of the odd-numbered rows and the sectors of the even-numbered rows.

32. (New) An information reproducing apparatus using an information recording medium configured to store an error correction code for data defined by a first information data block including K sectors and a second information data block including K sectors, wherein said error correction code comprises,

a first outer parity block (PO-a) generated for each column of a third information data block, the third information data block being an aggregation of sectors of even-numbered

rows of the first information data block and sectors of odd-numbered rows of the second information data block, and

a second outer parity block (PO-b) generated for each column of a fourth information data block, the fourth information data block being an aggregation of sectors of odd - numbered rows of the first information data block and sectors of even-numbered rows of the second information data block,

said information reproducing apparatus comprising:

means for performing error correction with respect to the third information data block by use of the first outer parity block (PO-a); and

means for performing error correction with respect to the fourth information data block by use of the second outer parity block (PO-b).